

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to Figs. 2a and 3.

Attachment: Replacement sheet
 Annotated sheet showing changes

REMARKS

In response to the Office Action mailed July 19, 2010, Applicants respectfully request reconsideration. Claims 1-10 were previously pending for examination. Claim 1 is herein amended. No claims have been added. The matter of claim 4 has been incorporated into independent claim 1. Claim 4 has been canceled. As a result, claims 1-3 and 5-10 are currently pending, with claim 1 being independent. No new matter has been added.

Amendments to the Specification

The specification includes an amendment in reference to lubricant 13 as included in the amended drawings. No new matter has been added by this amendment.

Objections Under 37 C.F.R. §1.83(a)

The drawings were objected to under 37 C.F.R. §1.83(a). Applicants have amended the drawings accordingly to show the required features. In light of the above, Applicants respectfully request that the objection to the drawings be withdrawn.

Rejections Under 35 U.S.C. §103(a)

I. Independent Claims

The Office Action rejects the previously presented independent claim 1 under 35 U.S.C. §103(a) as purportedly being unpatentable over Cordts et al. (U.S. Patent No. 2004/0093814) in view of Atkinson et al. (Great Britain Patent No. 2,226,033A) and Beele (U.S. Patent No. 5,344,106). The limitations of claim 4 have been incorporated into independent claim 1. However, claim 4 has also been rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over Cordts in view of Atkinson and Beele in further view of Horacek et al. (U.S. Patent No. 5,232,976). Applicants respectfully traverse these rejections.

Without acceding to the propriety of the rejections, Applicants have further herein amended independent claim 1 to recite, “wherein the crust-forming fire-retardant material has been chosen from polyammonium phosphate or melamine phosphate, and wherein the crust-forming fire-retardant material is present in such a high amount that a fire retardant crust is formed on a side of the foam when exposed to a fire.” These limitations are supported throughout the application including, for example, original claim 4 and paragraphs [0017] and [0024] of the published application. Claim 1 has also been amended to recite, “the first parts being substantially manufactured from a fire-resistant rubber and/or a fire-resistant thermoplastic.” This limitation is supported throughout the specification including, for example, paragraph [0001] of the published application.

The Office Action states that the combination of Cordts and Atkinson teaches the first parts being designed to at least partly envelop the transport device and the second parts being designed to be placed between the first parts and/or between the first parts and an inner wall of the opening to at least virtually completely seal the opening, the first parts being substantially manufactured from a fire-resistant rubber and/or a fire-resistant thermoplastic, or a combination thereof, the second parts being manufactured from a fire-resistant material based on an elastomeric foam with a substantially closed cell structure, see pages 5-6 of the current Office Action. Applicants respectfully disagree.

Cordts teaches a fire stopping apparatus for a through-penetration in a wall, floor, or the like, see paragraph [0007]. The apparatus includes a plurality of overlapping slats 16 that may be arranged to cover the through-penetration top opening while accommodating a bundle passed through the through-penetration, see Fig. 1. Slats 16 are intended to close the opening and protect it from foot traffic, see paragraph [0025]. The slats 16 are preferably made from metal, see paragraph [0028]. The apparatus further includes a fire stop material 30 arranged in the through-penetration to provide a fire stopping barrier, see paragraph [0029]. An optional barrier, not shown in the figures, is adapted to prevent the passage of smoke and is arranged in the through-penetration below overlapping slats 16 and in line with fire stop material 30, see paragraph [0038] and Fig. 1. Cordts states that the optional barrier may be an open cell foam, see paragraph [0038].

Atkinson is directed to a polymer foam that incorporates expandable graphite to create a flame resistant material, see abstract. Atkinson further discloses neutralizing the pH of the expandable graphite for inclusion in the polymer foam, see abstract and page 3 paragraph 3 – page 5 paragraph 1.

It is unclear to the Applicants what the Office Action defines as the first and second parts as recited in the claim. Page 4 of the Office Action refers to overlapping slats 16, side members 18, riser 10, fire stop material 30, and the optional barrier of Cordts. However, there is no specific statement indicating which components are the first and second parts. Applicants assume that the Office Action is referring to stop material 30 as the one of the parts and either overlapping slats 16 or the optional barrier as the other corresponding part. These combinations are addressed in more detail below.

Applicants note, that the combination of fire stop material 30 with overlapping slats 16 does not meet the recited claim limitation of, “the first parts being substantially manufactured from a fire-resistant rubber and/or a fire-resistant thermoplastic, or a combination thereof, the second parts being manufactured from a fire-resistant material based on an elastomeric foam with a substantially closed cell structure...” As stated above, overlapping slats 16 are meant to protect the opening from foot traffic and must therefore be structurally rigid. Cordts states that the overlapping slats 16 are preferably made from metal, see paragraph [0028]. Therefore, there would have been no apparent reason for one of skill in the art to make overlapping slats 16 from an open cell foam or a fire-resistant rubber/thermoplastic due to the required structural rigidity of the overlapping slats 16. Thus, the overlapping slats 16 are not the first or second parts since the overlapping slats are not formed of an open cell foam or a fire-resistant rubber/thermoplastic nor would there have been any reason to so form the slats because of the structural rigidity required. Consequently, the combination of fire stop material 30 and overlapping slats 16 of Cordts does not disclose explicitly or inherently the above recited claim language. Therefore, claim 1 is patentably distinct from the above combination of overlapping slats 16 and fire stop material 30 of Cordts.

Applicants also respectfully submit that neither of the above combinations disclose explicitly or inherently, “the first parts being designed to at least partly envelop the transport device and the second parts being designed to be placed between the first parts and/or between the first parts and an inner wall of the opening...” While fire stop material 30 may envelop bundle 12, neither overlapping slats 16 nor the optional barrier are placed between fire stop material 30 and the inner wall of the opening, see Fig. 3 and paragraph [0038]. Instead, fire stop material 30, the optional barrier, and overlapping slats 16 are aligned sequentially within the opening and are not placed between an inner wall of the opening and another one of the parts as recited in the claim, see Fig. 3 and paragraph [0038] of Cordts. Furthermore, given the arrangement of the fire stop material 30, the optional barrier, and the overlapping slats 16, the second parts simply are not placed in between the first parts regardless of which combination of first and second parts are selected. Consequently, Cordts does not explicitly or inherently disclose the second parts being designed to be placed between the first parts and/or between the first parts and an inner wall of the opening. Therefore, claim 1 is patentably distinct from the construction disclosed in Cordts.

The Office Action further states that the combination of Cordts and Atkinson teaches the second parts being manufactured from a fire-resistant material based on an elastomeric foam with a substantially closed cell structure suggesting the first part is the fire stop material 30 and the second part is the not shown optional barrier, pages 5 and 6 of the current Office Action. Applicants respectfully disagree.

Applicants respectfully submit that the combination of Cordts and Atkinson does not explicitly or inherently disclose a fire-resistant material based on an elastomeric foam with a substantially closed cell structure. As described in paragraph [0038] of Cordts the optional barrier is merely intended to block smoke. There is no discussion of the optional barrier including fire resistant properties. Instead, the fire stop material 30 is arranged and adapted to act as the fire-resistant material for the through penetration hole, see Fig. 3 and paragraph [0038]. Consequently, it is fire stop material 30 that would be exposed to a fire not the optional barrier described in paragraph [0038]. As such, there is no apparent reason one of skill in the art would modify the optional barrier of Cordts to be fire resistant. Therefore, the combination of Cordts and Atkinson

does not explicitly or inherently disclose a fire-resistant material based on an elastomeric foam with a substantially closed cell structure. For at least this reason, claim 1 is patentably distinct.

The Office Action also states that the outer structure of the foam is the crust. Applicants respectfully disagree.

As noted above, Applicants have further amended claim 1 to recite, “a fire retardant crust is formed on a side of the foam when exposed to a fire. As such, the fire retardant crust is not merely the outer structure of the foam. Instead, the fire retardant crust is formed due to the exposure of the foam to a fire. For at least this reason, claim 1 is patentably distinct.

Applicants further submit, that there would have been no apparent reason for one of ordinary skill in the art to include such a crust-forming foam in the apparatus of Cordts. Cordts does state that the optional barrier may be a foam. However, the optional barrier is located below cover assembly 2, see Fig. 3 and paragraph [0038]. Due to the presence of fire stop material 30, the optional barrier of Cordts, could only be exposed to a fire on one possible side, see Fig. 3. Therefore, the optional barrier is not intended to be exposed to a fire. As such, there would have been no apparent reason for the optional barrier to comprise a foam that forms a fire retardant crust when exposed to a fire since there would be no obvious benefit in such a modification for a part unlikely to be exposed to a fire. In view of the above, the combination of Cordts and Atkinson does not explicitly or inherently disclose a, “fire retardant crust formed on a side of the foam when exposed to a fire,” as now claimed. For at least this reason, claim 1 is patentably distinct.

In rejecting the incorporated limitations of claim 4, the Office Action further states that it would have been obvious to use the polyammonium phosphate or melamine derivatives as taught by Horacek with the combination of Cordts, Atkinson, and Beele, see page 8 of the current Office Action. Applicants respectfully disagree.

Horacek is directed to a thermally expandable fire-protection compound which includes expandable graphite, see abstract. Horacek further gives examples of additives which may be added to modify the fire behavior of the compound, see col. 2 line 67 – col. 3 line 8. These additives

include melamine and its derivatives as well as polyammonium phosphates, see col. 2 line 67 – col. 3 line 8.

Applicants respectfully submit that while Horacek discusses polyammonium phosphate and melamine and its derivatives, Horecek does not teach the recited claim limitation of, “wherein the crust-forming fire-retardant material is present in such a high amount that a fire retardant crust is formed on a side of the foam when exposed to a fire.” As detailed above, Horacek merely gives examples of additives which may be added to modify the fire behavior of a thermally expandable fire-protection compound. Horacek does not discuss explicitly or inherently the compound forming a fire retardant crust when a side of the foam is exposed to a fire. Since there is no explicit or inherent disclosure of a fire retardant crust or its equivalent in Horacek, there would have been no apparent reason for one of skill in the art to include the above stated crust-forming fire-retardant materials in such a high amount that a fire retardant crust is formed on a side of the foam when exposed to a fire. Furthermore, as discussed above the combination of Cordts and Atkinson does not disclose explicitly or inherently forming a fire retardant crust on a side of the foam when exposed to a fire. Consequently, Horecek, separately and in combination with the above stated references, cannot anticipate the claim limitation of, “the crust-forming fire-retardant material has been chosen from polyammonium phosphate or melamine phosphate, and wherein the crust-forming fire-retardant material is present in such a high amount that a fire retardant crust is formed on a side of the foam when exposed to a fire.” For at least this reason, claim 1 is patentably distinct.

As detailed above the cited references do not disclose either separately or in combination the recited claim language. Therefore, claim 1 is patentably distinct from the cited references for at least the above stated reasons. Consequently, Applicants respectfully request that the rejections of claim 1 be withdrawn.

II. Dependent Claims

The Office Action rejects claims 2-3 and 5-10 under 35 U.S.C. §103(a). Applicants respectfully traverse each of these rejections.

Dependent claims 2-3 and 5-10 depend from independent claim 1 and are allowable for at least the same reasons. Consequently, Applicants believe that it is unnecessary at this time to argue the further distinguishing features of all of the dependent claims. Applicants respectfully request that the rejections of dependent claims 2-3 and 5-10 be withdrawn.


CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance to discuss any outstanding issues relating to the allowability of this application.

If the response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. Applicants believe no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 23/2825 under Docket No. B1215.70011US00 from which the undersigned is authorized to draw.

Dated: *October 19, 2010*

Respectfully submitted,

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Attachments